

IN THE CLAIMS:

1. A flat plasma display for displaying data in accordance with a high voltage and drive voltages produced from said high voltage, wherein said flat plasma display comprises:
 - a first high voltage decision unit determining whether or not said high voltage is at a specific value or within a specific range after a power supply is turned on and initialization is carried out;
 - a first drive voltage decision unit determining whether or not said drive voltages are at specific values or within specific ranges;
 - a second high voltage decision unit determining whether or not said high voltage is kept at the specific value or within the specific range after the start of a protective operation of an internal power supply circuit that generates said drive voltages;
 - a second drive voltage decision unit determining whether or not said drive voltages are kept at the specific values or within the specific ranges; and
 - a drive control signal control unit controlling drive control signals of said flat plasma display in response to the decided results of said first and second high voltage decision units and said first and second drive voltage decision units.
2. A flat plasma display as claimed in claim 1, wherein the control of said internal power supply circuit is carried out together with the control of said drive control signals in response to the decided results of said second drive voltage decision unit.
3. A flat plasma display as claimed in claim 1, wherein said flat plasma display is initialized when said second high voltage decision unit determines that said high voltage is not kept at the specific value or the specific range, and an internal power of said internal power supply circuit and said drive voltages are cut OFF when said second drive voltage decision unit determines that said drive voltages are not kept at the specific values or within the specific ranges.
4. A flat plasma display as claimed in claim 1, wherein said flat plasma display further comprises a time compensation unit for compensating for the time between the instant that said high voltage is applied until said drive voltages reach the specific values.

5. A flat plasma display as claimed in claim 1, wherein said specific value compared with said high voltage in said first high voltage decision unit differs from said specific value compared with said high voltage in said second high voltage decision unit.

6. A flat plasma display as claimed in claim 1, wherein said flat plasma display comprises a three-electrode surface discharge AC plasma display.

7. A flat plasma display as claimed in claim 6, wherein said three-electrode surface discharge AC plasma display further comprises:

first and second electrodes arranged in parallel with each other; and
third electrodes orthogonal to said first and second electrodes, said first electrodes being commonly connected together and said second electrodes being arranged to define respective display lines, wherein said display has a surface discharge structure employing wall charges as a memory.

8. A flat plasma display as claimed in claim 7, wherein said three-electrode surface discharge AC plasma display further comprises:

a first substrate, said first and second electrodes being arranged in parallel to each other on said first substrate and paired for defining respective display lines;

a second substrate spaced apart from and facing said first substrate, defining a cavity therebetween, said third electrodes being arranged on said second substrate in orthogonal relationship to said first and second electrodes and displaced therefrom;

wall charge accumulating dielectric layers respectively covering the surfaces of said first and second electrodes;

a phosphor formed over said second substrate;

a discharge gas sealed in the cavity between said first and second substrates; and

cells formed at intersections where said first and second electrodes cross said third electrodes.

9. A flat plasma display employing at least one high voltage for supplying a sustain pulse, said flat plasma display comprising:

a voltage detection unit detecting said high voltage and other drive voltages which are produced by said high voltage;

an internal power supply circuit; and

an internal power supply controlling unit producing power supply control signals controlling an operation of said internal power supply circuit in response to said detected high voltage and other drive voltages.

10. A flat plasma display as claimed in claim 9, wherein said internal power supply controlling unit stops the operation of said internal power supply circuit by changing said power supply control signals in response to said detected high voltage and other drive voltages.

11. A flat plasma display employing at least one high voltage for supplying a sustain pulse, comprising:

a voltage detection unit detecting said high voltage;
an internal power supply circuit; and
an internal power supply controlling unit storing first and second specific values and selectively comparing the stored first and second specific values with said detected high voltage, said first specific value being used when said high voltage is rising and said second specific value being used when said high voltage is falling, and controlling an operation of an internal power supply circuit in response to the compared result of said detected high voltage.

12. A flat plasma display as claimed in claim 11, wherein said internal power supply controlling unit starts a circuit operation through a control circuit if said detected high voltage reaches said first specific value, and stops the circuit operation through said control circuit if said detected high voltage is below said second specific value.

13. A flat plasma display, comprising:

a signal detection unit detecting a specific signal input from an external source;
an internal power supply circuit; and
an internal power supply controlling unit producing power supply control signals and stopping an operation of the internal power supply circuit by changing the power supply control signals, in response to said detected specific signal.

14. A flat plasma display, comprising:

a display data checking unit checking display data input to said flat plasma display from an external source;
an internal power supply circuit; and

an internal power supply stopping unit controlling an operation of the internal power supply circuit by changing power supply control signals, in response to the result of checking said display data.